EXHIBIT B

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VOLUME III

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

IN RE:

Methyl Tertiary   :MDL NO. 1358 (SAS)
Butyl Ether ("MTBE"):
Products Liability   :
Litigation   :

        In Re:
            City of New York

CONFIDENTIAL (Per 2004 MDL 1358 Order)

July 1, 2009

Continued CONFIDENTIAL
Videotaped Deposition of DAVID B. TERRY,
P.G., held in the law offices of
McDermott, Will & Emery, 340 Madison
Avenue in New York, New York, beginning
at approximately 9:34 a.m., before Ann
V. Kaufmann, a Registered Professional
Reporter, Certified Realtime Reporter,
Approved Reporter of the U.S. District
Court, and a Notary Public.

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1   A.   Well, I mean, within
2   the level of precision that we are
3   talking about, they are in the same
4   range, both -- all these analyses are in
5   the same range, so that's really what
6   I'm talking about, most likely.
7   Q.   And the level of precision
8   is reflected by your projections in
9   scenarios 2A, 2B, and 2C?
10   A.   Well, those are just
11 different mass assumptions or mass
12 ranges that we used in conducting
13 Analysis 2.
14   Q.   I will ask the question
15 once again. With respect to the various
16 scenarios that you've set forth in your
17 February 6 report, February 27 report,
18 March 23 report, and April 20 report,
19 which of the Analysis 2 scenarios in
20 your opinion to a reasonable degree of
21 scientific probability best represents
22 what you believe the concentration of
23 MTBE will be at Station 6 in the future?
24   A.   I'm not sure that any one

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1   of them is better than another. I mean,
2   they are all roughly the same result,
3   and so that's what I'm really testifying
4   about. Not so much specifically is the
5   number 17 or is it 18; that's not so
6   much my conclusion as it is the
7   generality of what we're seeing.
8   Q.   And the generality that you
9   are seeing is what?
10   A.   Is a peak concentration in
11 that range for Analysis 2 and then a
12 decline in concentration over time and
13 eventually a longer term, more fixed
14 concentration.
15   Q.   With regard to the
16 precision of your estimates using
17 Analysis 2, can you state to a
18 reasonable degree of scientific
19 probability what the confidence interval
20 is that bounds those estimates?
21   A.   I can't really state that
22 except there's a certain range of mass
23 that's been, you know, input into the
24 aquifer over time. So depending on

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1   specifically what that range of mass is,
2   that's going to affect the ultimate
3   concentration. What we used was
4   reasonable estimates of those masses,
5   but those masses aren't known.
6   Q.   With regard to the
7   predictions of future concentrations of
8   MTBE in Station 6 using Analysis 2, did
9   you actually calculate a statistical
10 confidence interval bounding those
11 estimates?
12   A.   No, we did not.
13   Q.   With regard to the MT3D
14 modeling that was performed for
15 Analysis 2, do you know from your
16 experience or from the literature
17 whether or not these types of estimates
18 have a generally accepted error rate?
19   A.   No, I don't believe that
20 they do.
21   Q.   With respect to your work
22 as a professional, have you in your
23 professional work ever done a post-audit
24 analysis of any of your predictions for

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1   MTBE concentrations at any of the other
2   sites you've worked at?
3   A.   I don't know if I would
4   call it a post-audit analysis. We've
5   certainly had situations where we have
6   projected sort of either the timing or
7   concentration of the arrival of a
8   contaminant and then, you know, lived to
9   see or experience what actually occurred
10 at those locations.
11   Q.   And did you ever document
12 any of those observations regarding
13 whether or not the predictions that you
14 made came to pass in a peer-reviewed
15 journal article?
16   A.   In a peer-reviewed journal
17 article?
18   Q.   Yes, sir.
19   A.   No, not in a peer-reviewed
20 journal article.
21   Q.   With respect to your
22 professional work for any of the
23 modeling that you have performed, have
24 you ever conducted a formal post-audit

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1   analysis to determine whether predicted
2   concentrations using the model actually
3   occurred in reality?
4   A.   As I said, I don't think
5   I've done a formal post-audit analysis.
6   I have certainly, you know, seen results
7   post-projection in that sense, but that
8   wasn't a formal post-audit as you are
9   describing.
10   Q.   With respect to the
11   precision of the estimates that you have
12   made in this case, what precision do you
13   assign to the estimated future
14   concentration of MTBE using Analysis 2
15   for Station 6 wells?
16   A.   Well, I think what I'm
17   testifying about here is that the most
18   likely of the scenarios that we
19   developed in Analysis 2 is the 2,000-
20   gallon release scenario, that
21   Analysis 2C.
22   And the reason for that is
23   if you look at the area of capture zone
24   for Station 6, it is approximately 7

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1   miles. And if you look at the multitude
2   of sources that are in that area, the
3   total sort of mass that's in the capture
4   zone associated with the C scenario is
5   more likely than the A or B scenarios.
6   Q.   And what is the precision
7   that bounds that estimate using the 2C
8   scenario?
9   A.   Yeah, I can't really
10   express it in that form because the
11   mass, the quantum of the mass is
12   unknown.
13   Q.   With regard to the quantum
14   of mass, can you tell the jury in this
15   case what the precision is regarding the
16   estimate of the quantum of mass?
17   MR. GREENE: Object to form.
18   A.   I'm not -- what we did was
19   we looked at likely release scenarios at
20   these sites. We looked at the total
21   mass that was in the capture zone for
22   these wells. And those things represent
23   a reasonable scenario. But beyond that,
24   we can't statistically bound that

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1   because we don't have the data that
2   would allow us to do that.
3   Q.   Can you for the jury in
4   this case quantify the precision of your
5   estimates of the future concentration of
6   MTBE in Station 6 wells such that they
7   would know what the upper bound limit is
8   and what the lower bound limit is?
9   A.   Well, I think what we did
10   is a range of assessments. We did --
11   and I would say that our Analysis 1
12   assessment represented more of an upper-
13   range estimate and our Analysis 2C was
14   more of a lower range. But they are
15   both, you know, reasonable scenarios.
16   Certainly they're both -- in both cases
17   there could be more mass there than what
18   we've used. But they are reasonable
19   scenarios, so I would use them as a
20   range.
21   Q.   With respect to the
22   Analysis 2 that you performed in this
23   case, and specifically the projections
24   in scenario 2C, can you quantify with

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1   any reasonable degree of scientific
2   probability what the precision is of
3   that estimate?
4   A.   I don't think I can express
5   that as a percent precision, no.
6   Q.   With regard to Analysis 1
7   for purposes of this case, can you
8   quantify for the jury to any reasonable
9   degree of scientific probability the
10   accuracy or precision of the estimates
11   of future MTBE concentrations using that
12   scenario?
13   A.   I don't think I could
14   express it that way. All I'm saying is
15   that when we look at the total mass
16   that's in the capture zone for -- in
17   Analysis 1, that that represents a
18   reasonable estimate of the mass that's
19   in the capture zone. If there's mass in
20   the capture zone, it is going to arrive
21   in the future at Station 6.
22   Q.   And I'll ask the question
23   again: Can you with any mathematical
24   precision quantify for the jury to any

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1 reasonable degree of scientific
2 probability the precision of your
3 estimates of future MTBE concentrations
4 in Station 6 wells using Analysis 1?
5   A.   If you are looking for some
6 statistical measure of the precision, I
7 can't do that.
8   Q.   With regard to the method
9 that you employed in Analysis 1, based
10 on your review of peer-reviewed
11 engineering and scientific literature,
12 can you tell us whether there is a
13 generally accepted or known error rate
14 using that method to predict future
15 concentrations of contaminants in wells
16 like MTBE in Station 6?
17   A.   I mean, I think there's an
18 error rate inherent in the model; in
19 other words, there's a way to describe
20 whether the model can accurately
21 simulate the migration of MTBE. But the
22 other part of it is the mass that you
23 are putting into the model. And that's,
24 you know, classically in Long Island

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1 MTBE contamination cases, that's been
2 the great unknown.
3   So there's a paper, I think
4 it's by Weaver, Haas, and Sosik, that
5 describes the problem of trying to
6 quantify MTBE mass and understanding,
7 you know, where that MTBE mass is. The
8 approach that they are laying out is to
9 estimate, or if you have evidence of a
10 major discharge to calculate or estimate
11 the MTBE mass associated with that
12 discharge and then, you know, model that
13 forward or project forward where that
14 goes. So really that's the approach
15 that we took here.
16   Unfortunately, one of the
17 characteristics of MTBE that was
18 discovered later is that the ways that
19 it's been monitored at discharge station
20 sites, which was really developed for
21 some of the other gasoline contaminants,
22 has been inadequate to characterize
23 MTBE, especially MTBE mass. So there's
24 really no way with the data set that's

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1 available. And there is an
2 understandable reason why that data set
3 is not available. There's really no way
4 to, you know, accurately bound that in a
5 way that you could then statistically
6 test it.
7   So what we did is take the
8 same approach that they did. And, you
9 know, historically the problem was that
10 MTBE mass wouldn't really be discovered
11 until it impacted a supply well. So
12 we're now going back to sources saying
13 why aren't we able to see this before it
14 impacts a supply well.
15   And then, you know, the
16 development -- the method that they
17 developed was to say, you know, look for
18 evidence of the discharge, estimate the
19 mass associated with that discharge, and
20 then model that forward to see what
21 impacts that may have in the future. So
22 that's really the approach that we took
23 here.
24   Q.   With respect to Analysis 1,

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1 did you calculate a confidence interval
2 which represents to a reasonable degree
3 of scientific probability the accuracy
4 or precision of the predictions of
5 future MTBE impacts in Station 6 wells?
6   A.   Well, we did an analysis
7 that just used target calibration
8 points, and we found that the model was
9 able, over that period of 2004 to 2008
10 was able to accurately describe what
11 happened at those points within 1.8 ppb
12 or so. So that is sort of one measure
13 of that.
14   Q.   Did you for purposes of
15 your opinions in this case use any
16 generally accepted statistical method
17 and calculate a confidence interval
18 which would permit you to a reasonable
19 degree of scientific probability to tell
20 the jury what the accuracy or precision
21 is of the estimates of future MTBE
22 impacts in Station 6 wells using
23 Analysis 1?
24   A.   Yeah, I don't think it's

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1   possible to do that with the data set
2   that we have on MTBE in this aquifer.
3   Q.   Can you quantify to any
4   reasonable degree of scientific
5   probability what the precision or
6   accuracy is using any generally accepted
7   statistical method for the future
8   impacts of MTBE in Station 6 using
9   Analysis 1?
10   A.   Well, I said, I think I
11 said we didn't use any statistical
12 analysis to do that kind of an estimate,
13 so....
14   Q.   You indicated that there
15 are known error factors using modeling.
16 You were referring to modeling using
17 MT3D?
18   A.   In any model.
19   Q.   And with regard to your
20 experience, what is the generally
21 accepted and known range of error using
22 deterministic models to predict the
23 concentration of a solute like MTBE in a
24 well in the future?

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1   A.   I'm not sure I understand
2   the question.
3   Q.   With respect to the models
4   that you've operated, particularly
5   MT3D --
6   A.   Uh-huh.
7   Q.   -- do you know what in the
8   literature is the generally accepted and
9   known error rate that bounds predictions
10 of future concentrations of a solute
11 like MTBE in a well in the future?
12   A.   Yeah, I don't think -- I
13 don't know of a generally accepted error
14 rate like that.
15   Q.   When you used the term
16 there there are some generally accepted
17 error rates, what were you referring to?
18   A.   I don't know if -- did I
19 say generally accepted error rates?
20   Q.   In response to the question
21 was there generally accepted, you said
22 you knew there were some error rates.
23   A.   Well, I mean, any model is
24 a approximation of reality. So I don't

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1   think there's a model that's ever been
2   created that has no error in it.
3   Really -- but error is, you know, an
4   interesting question because it really
5   depends on the problem that you are
6   using the model to address. So any
7   model has, you know, some kind of
8   difference in it compared to what
9   happens in reality.
10   Q.   With respect to the
11 question that was being addressed here,
12 was it your objective to predict
13 precisely what the concentration of MTBE
14 would be in Station 6 using the analysis
15 you employed?
16   A.   I don't know that
17 "precisely" is the word I would use. I
18 mean, what we're looking to do is that
19 -- the objective of our study is that a
20 treatment plan needs to be designed for
21 Station 6.
22   And we know that there's
23 MTBE in the groundwater that's
24 intercepted by Station 6. So one of the

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1   questions that a design engineer has is
2   how much MTBE, in terms of
3   concentration, is going to occur at this
4   facility and how long is it going to
5   last? Because either one of those
6   questions could influence the selection
7   of specific remedial technology that's
8   used at that facility. To some extent
9   it has to be somewhat of a conservative
10 analysis when you do that. Your goal is
11 that you are protecting the quality of,
12 you know, potable drinking water.
13   So that was really the goal
14 of this, was to say we know that there's
15 MTBE that has been discharged into the
16 aquifer within the capture zone of
17 Station 6. So knowing what information
18 we do have, what's a reasonable estimate
19 of what those concentrations would be in
20 the future so that when we design our --
21 or select our treatment technology, it
22 is going to be adequately protective of
23 that drinking water source.
24   Q.   And with regard to the

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1   Analysis 1, you know, I couldn't state
2   from Analysis 1 by itself any
3   information about when a discharge
4   occurred.
5   Q.   With regard to Analysis 2
6   for Station 6, can you state an opinion
7   to a reasonable degree of scientific
8   probability exactly when gasoline with
9   MTBE was first released into the
10 groundwater beneath each of those
11 stations?
12   A.   Well, for Analysis 2 we had
13 release dates or we had spill number
14 dates. So sometimes those spill number
15 dates are associated with when the
16 contamination was discovered. So they
17 may not exactly replicate the date that
18 the spill occurred. We used them as a
19 tool to estimate when spills occurred,
20 but there's some difference between some
21 of those dates and the actual spill
22 dates.
23   Q.   Fair to say that you used
24 the spill report date and that the

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1   actual release into groundwater occurred
2   prior to that date but you don't know
3   exactly when?
4   A.   I think it's fair to say
5   that if we are looking at a case
6   where -- especially the cases, as a lot
7   of them were, where the discovery was
8   related to tank closure and replacement,
9   so you are going in, you are replacing a
10 tank, there is no report of any
11 discharge at a site, you are digging
12 into the ground, you're removing tanks,
13 and you are seeing the tanks have holes
14 in them, which is often the case, or you
15 are seeing a substantial amount of soil
16 contamination, that it's fair to say
17 that the discharge that caused that
18 contamination occurred prior to that day
19 that you discovered it. That's fair to
20 say.
21   Q.   And with regard to those
22 stations where the date of release is
23 unknown, can you state with any
24 reasonable degree of scientific

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1   probability exactly when MTBE first
2   entered the groundwater system at those
3   locations?
4   MR. GREENE: Object to the
5   form.
6   You can answer.
7   A.   I'm sorry, I'm going to
8   have to have you repeat it, just because
9   I lost it.
10   MR. GREENE: I apologize,
11 too.
12   Q.   With respect to the
13 stations where the exact date of the
14 release may not be known because you are
15 working from the spill date and the
16 report of the contamination, are you
17 able to state an opinion to any
18 reasonable degree of scientific
19 probability exactly when MTBE was first
20 released into groundwater at that site?
21   A.   I don't think you can say
22 when MTBE absolutely first reached
23 groundwater. Some of the sites that we
24 looked at had multiple spill reports.

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1   So in some cases I think there was cases
2   where there was an investigation done
3   initially and then there was an
4   investigation done later.
5   Sometimes the later results
6   were different than the initial
7   results. So, you know, from that you
8   might conclude that the later spill
9   date -- that there was some kind of
10 discharge in between those two dates,
11 you can bound it. And in all the cases
12 I think you could bound the upper end
13 because you know when it was
14 discovered. But I don't -- in many
15 cases you can't bound the lower end
16 completely, that's true.
17   MR. STACK: The videographer
18 has told us we are about to run out of
19 tape, Mr. Terry. So we will take a
20 break and resume promptly, if we can.
21   MR. GREENE: Great. Thanks.
22   THE VIDEOGRAPHER: We're
23 going off the record. The time is
24 10:34 a.m. This is the end of tape 1 of

20 (Pages 845 to 848)

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1   MTBE being present at 113-40 Merrick
2   Boulevard; am I correct?
3   A.   Right. Initially there's
4   an innermost area of contour that we had
5   assigned a value of 78,802, but that was
6   actually the total VOC concentration at
7   that location. The MTBE component of
8   that was 65,900 ppb. So we changed the
9   value of that in the model to reflect
10 the MTBE value.
11   Q.   And do you know with
12 respect to that particular value whether
13 it was a value that was observed in a
14 soil vapor extraction well?
15   A.   I don't recall.
16   MR. STACK: The videographer
17 has indicated that we're about ready to
18 run out of tape, so we'll go off the
19 record and afford him an opportunity to
20 do so and give you a chance to stretch
21 your legs as we head into the home
22 stretch.
23   THE VIDEOGRAPHER: We're
24 going off the record. The time is

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1   3:04 p.m. This is the end of tape 4 of
2   the deposition of David Terry.
3   (Recess.)
4   THE VIDEOGRAPHER: Back on
5   the record. The time is 3:14 p.m. This
6   is the start of tape 5 of the deposition
7   of David Terry.
8   BY MR. STACK:
9   Q.   Mr. Terry, with respect to
10 the Analysis 1 that you performed, you
11 made certain changes that you've
12 indicated on page 21 to vary the contour
13 line in proximity to well 6D and to
14 revise the maximum concentration contour
15 at the service station at 113-40 Merrick
16 Boulevard.
17   In looking at Figure 4,
18 there are areas within this depiction;
19 for example, the area going from S6-005
20 down to S6-002. That area, according to
21 the scale on the map, is approximately a
22 mile and a half.
23   Do you have any monitoring
24 well data in that mile-and-a-half

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1   interval to indicate that there is MTBE
2   present in the groundwater system at the
3   concentrations shown in Figure 4?
4   A.   I'll assume you mean
5   S6-022. No, there's no specific
6   monitoring well data in between those
7   two points.
8   Q.   With regard to the distance
9   between S6-025 and S6-026, is there any
10 groundwater monitoring data between
11 those two points to indicate that the
12 concentration of MTBE reflected on
13 Figure 4 has actually been detected
14 through testing in the groundwater in
15 that particular transect?
16   A.   No, there is not.
17   Q.   With regard to other areas
18 on this map, there is a depiction which
19 you have background levels, and the
20 background levels for the area lying --
21 I'm going to the left side of the map,
22 Dave -- between 3651 down to 3161, that
23 would appear to be approximately 2.8
24 miles, and there is concentration of

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1   MTBE that's illustrated as being present
2   there.
3   I don't want to try to
4   interpret the map because the color is
5   sometimes difficult. What is the
6   concentration of MTBE that is
7   illustrated between well 3651 and 3161
8   on Figure 4 in your rebuttal report?
9   A.   I believe that's 0.1 ppb.
10   Q.   And is there any
11 groundwater monitoring well between
12 those points to indicate that there's
13 any contamination present in the
14 groundwater at those locations?
15   A.   Not depicted here, no.
16   Q.   With regard to the area in
17 the vicinity of S6-023, there is
18 contamination in the vicinity of that
19 location. And there is a plume or area
20 of contamination which appears to be
21 lying north of the pyramid to show the
22 location.
23   Is there any evidence that
24 at the Service Station S6-023 that

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1 groundwater is moving northward and that
2 contamination at that site is moving
3 northward?
4   A.   I don't think so.
5   Q.   Is there any data in the
6 reddish-pink area surrounding S6-023 to
7 confirm that there is MTBE present in
8 the groundwater system at the
9 concentration shown on Figure 4?
10   A.   Well, in the middle,
11 S6-023, is where the data is. That's
12 where we do have data.
13   Q.   And the only point is where
14 the one well is located at S6-023; am I
15 correct?
16   A.   Right.
17   Q.   Is there any data to
18 indicate anywhere else in that reddish
19 area surrounding S6-023 that there is a
20 monitoring well from which data obtained
21 from sampling in 2004 indicates the
22 concentration of MTBE in groundwater is
23 as it's reflected on Figure 4?
24   A.   Well, no. I mean, it was

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1 based on the 6023, but there's no
2 additional point just, you know, a short
3 distance from S6-023 in addition to
4 that, if that's what you're asking me.
5   Q.   In looking at S6-002, you
6 have a single point at that service
7 station which reflected a concentration
8 in 2004 that is reflected in the
9 tables. And you've drawn an area around
10 that to indicate what the area of
11 contamination may be emanating from
12 S6-002, the station at 84-04 Parsons
13 Boulevard; am I correct?
14   A.   Yes.
15   Q.   Other than the well which
16 had 14,400 parts per billion of MTBE, is
17 there any other well downgradient or to
18 the southeast of that location to
19 confirm that there's MTBE present at
20 that site in the concentrations
21 indicated in the Figure 4 in your
22 rebuttal report?
23   A.   No. This was just based on
24 the 6-002.

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1   Q.   Now, with regard to the
2 S6-002, that one location, are there
3 other wells at that service station
4 indicating that there are lower
5 concentrations or no MTBE present in the
6 groundwater?
7   A.   There may be.
8   Q.   With regard to the areas
9 that are illustrated on Figure 4, did
10 you subsequent to your first report
11 utilize any computer assistance to
12 illustrate the areas of contamination
13 present in Layer 1 in the aquifer in
14 2004?
15   A.   So subsequent to the first
16 report that I did, did I use a computer
17 to do what?
18   Q.   To illustrate the areas of
19 contamination present in 2004 in Layer 1
20 which you used as input values.
21   A.   Did I use the computer
22 to -- I'm not sure what you're asking
23 about the computer.
24   Q.   Okay. Looking at S6-002,

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1 the area that is shaded around that red
2 and tan, for lack of a better term, that
3 area, did you use a computer graphics
4 package to illustrate that area for
5 purposes of your rebuttal model?
6   A.   Well, we just -- we created
7 this input contour map using a computer.
8   Q.   And what computer model did
9 you use?
10   A.   That's not a computer
11 model; it's just a -- it is a way of
12 drawing the contour.
13   Q.   And in terms of identifying
14 the area in which certain contours would
15 be located, did you do that by hand or
16 did you let the computer prepare the
17 illustration?
18   A.   No. We looked at using a
19 computer to do this contouring, but the
20 areas involved -- the areas assigned by
21 the computer to these values were very
22 large, so we refined this -- you know,
23 we elected to use a hand-based
24 contouring method instead, which, you

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